

Remarks

Applicants respectfully request reconsideration. To advance the prosecution of this application, Applicants have amended claims 1, 3, 9-11, 18-20, and 24, canceled claims 16-17, and submitted the following remarks.

Claim Rejections: 35 U.S.C. § 102

The Examiner has rejected claim 21 under 35 U.S.C. § 102(e) as being anticipated by Shultz et al. (US Patent No. 7,269,482, hereinafter, "*Shultz*"). Applicants respectfully submit that this rejection is improper and should be withdrawn.

Shultz is directed to a software framework 200 for managing the flow of digital information within a vehicle (Abstract). The system of *Shultz* includes integrated software applications 204 that communicate with a data warehouse 214. See Fig. 2. The data warehouse includes data sources 218. The data sources 218 can be either "sources" or "listeners." Col. 5, line 66 – col. 7, line 3. The "sources" are "locations in the data warehouse 214 to which an interface or application will look [sp.] to for data values for display or processing." Col. 5, lines 62-64. The "listeners" are "locations that applications or interfaces look to send values to based on conditions, triggers, or user actions." Col. 5, lines 64-66.

The software applications 204 store and retrieve vehicle parameter data via the data sources 218 in the data warehouse 214. For example, "after a given value is stored in the data source 218, other applications can look-up the data source 218 and monitor any value changes in that data source." Col. 6, lines 36-38. The data warehouse 214 thus "provides an abstract interface for available vehicle data." Col. 5, lines 48-49.

The use of the data warehouse does not explain how data is retrieved from devices over a vehicle data bus in the first instance. To address this need, *Shultz* includes a communications manager 212, which "provides an abstract interface between the framework 200 and devices and busses 206 that communicate with the framework." Col. 4, lines 46-48. The communications manager 212 is "responsible for [...] invoking low-level routines necessary to support specific communication protocols." Col. 4, lines 47-54. *Shultz* briefly discloses a process by which input-output device modules are "registered" with the software framework 200:

Registering input-output modules allow variation of bus message protocols, thereby allowing changes to the formats of messages to and from the vehicle bus 108 without changing the definitions of corresponding data entries stored in the data warehouse 214. [col. 4, lines 57-62]

The communications manager 212 therefore handles communication with devices over a vehicle's data bus, whereas the data warehouse 214 stores vehicle information that can be shared among different telematics applications.

In contrast with *Shultz*, claim 21 is directed to a local data acquisition unit for installation within a vehicle. The unit includes, *inter alia*, a "telematics application" and an "abstract software layer,"

wherein the abstract software layer is constructed and arranged for extracting vehicle data from the proprietary vehicle data bus in response to the generic requests from the telematics application and for providing the extracted data to the telematics application.

Although the communication manager 212 of *Shultz* appears to extract vehicle data from vehicle data busses, neither the communications manager 212 nor any other structure of *Shultz* extracts vehicle data from a proprietary vehicle data bus "*in response to the generic requests from the telematics application.*" The communications manager 212 and the data warehouse 214 operate independently. Telematics applications running on the framework of *Shultz* turn to the data sources 218 within the data warehouse 214 to access vehicle parameter data, not to the vehicle data bus itself. Vehicle data in *Shultz* are already stored in the data warehouse 214 when the telematics applications request them. There is no indication that the communications manager 212, the data warehouse 214, or any other structure in *Shultz*, reaches out to obtain vehicle data from a vehicle data bus specifically "*in response to*" a request from a telematics application.

Therefore, *Shultz* does not disclose an abstract software layer "*constructed and arranged for extracting vehicle data from the proprietary vehicle data bus in response to the generic requests from the telematics application,*" as required by claim 21. Therefore, and for at least this reason, *Shultz* does not anticipate claim 21, and the rejection of claim 21 under 35 U.S.C. § 102(e) is overcome.

As claim 21 has not been rejected under any other grounds, Applicants respectfully submit that claim 21 is allowable.

The data acquisition unit recited in claim 21 has an advantage over the software framework of *Shultz*. Because *Shultz* relies on the data warehouse 214 as the central repository of vehicle data, it also carries the burden of ensuring that all data is kept up to date. For example, if a telematics application requests vehicle speed from the data warehouse, there is a risk that the value stored in the data warehouse will be stale and therefore an inaccurate reflection of the vehicle's current state. In contrast, with the data acquisition unit recited in claim 21, vehicle data is obtained from the vehicle data bus as it is needed by the telematics application, effectively on demand. This arrangement inherently avoids stale data, and therefore promotes accuracy in the conduct of the telematics application.

Claims 22 and 23 depend from claim 21. Claims 18-20 have been amended to depend from claim 21. Therefore, claims 18-20 and 22-23 are also allowable.

The Examiner has rejected claim 24 under 35 U.S.C. §102(e) as being anticipated by *Shultz*. Applicants have amended claim 24 and respectfully submit that claim 24 as amended is allowable.

As an initial matter, Applicants have corrected claim 24 to change "*creating a telematics application*" to "*providing a telematics application*." This change is not related to the rejection but simply reflects the fact that the claim does not require a new telematics application to be created for each vehicle.

Claim 24 as amended is directed to a method of deploying a telematics application in a plurality of vehicles having different makes and/or models, wherein an abstract software layer is installed within each of the plurality of vehicles and is operatively connected to a data bus of the respective vehicle. The method includes, *inter alia*, the steps of

providing a telematics application that includes generic requests to the abstract software layer for vehicle data; [... *and*]

accessing, by the abstract software layer and responsive to the generic requests by the telematics application, vehicle data specified in the telematics application from the respective vehicle's data bus[.]

Shultz does not disclose all the steps of claim 24 as amended. For example, *Shultz* does not disclose the "*accessing*" step included above. As already stated, telematics applications running in the *Shultz* framework access vehicle data from a data warehouse 214, not from the vehicle data bus. In addition, no structure in *Shultz* is arranged for accessing vehicle data from the respective vehicle's data bus "*responsive*

to the generic requests by the telematics application,” as required by claim 24 as amended. Telematics applications in *Shultz* can store and retrieve vehicle data from various data sources 218 in the data warehouse 214, but nothing suggests that telematics applications can directly cause data to be accessed from a vehicle data bus. Therefore, *Shultz* does not disclose “accessing, by the abstract software layer and responsive to the generic requests by the telematics application, vehicle data specified in the telematics application from the respective vehicle’s data bus,” as recited in claim 24 as amended.

Therefore, and for at least this reason, *Shultz* does not anticipate claim 24 as amended. Therefore, the rejection of claim 24 as amended is overcome. As claim 24 as amended has not been rejected under any other grounds, Applicants respectfully submit that claim 24 as amended is allowable.

Claim Rejections: 35 U.S.C. § 103

The Examiner has rejected claim 1 under 35 U.S.C. § 103(a) as being obvious based on *Shultz* in view of *Seashore*. (US Patent No. 5,916,286). Applicants have amended claim 1 and respectfully submit that claim 1 as amended is allowable.

The instant amendments were not required to overcome the rejection, however, as the Office Action did not make a *prima facie* case for rejecting claim 1. Claim 1 as previously presented recited, *inter alia*, the following steps, which the Office Action did not address:

- extracting vehicle data from the vehicle data bus using the vehicle data bus information retrieved from the database, the vehicle data corresponding to the request for vehicle parameter data;

- interpreting the retrieved vehicle data; and

- providing the interpreted data to the telematics application to satisfy the request for vehicle data.

The Office Action made no assertion that any of the above-recited steps can be found in either of the cited references. Therefore, the rejection did not address all elements of claim 1, and the rejection of claim 1 under 35 U.S.C. §103(a) should be withdrawn.

Applicants have amended claim 1 to improve its clarity, by replacing the term “vehicle data” with the term “vehicle parameter data” and by replacing the term “data bus information” with the term “data bus configuration information.” As used throughout

the claims, the term, “*vehicle parameter data*,” refers to the actual content of vehicle information conveyed over a vehicle data bus, such as engine speed, for example. See ¶29 of the specification. It does not refer to the format or protocol of the data bus itself. In contrast, the term “*data bus configuration information*” refers to information pertaining to a particular vehicle data bus. It includes, for example,

the data protocol type, the access method for the parameter, value addresses, shift and mask information, return value decoding methods, scaling and unit conversion, etc. [¶27]

In simple terms, “*vehicle parameter data*” specifies information about a vehicle, whereas “*data bus configuration information*” specifies information about a data bus.

With this distinction in mind, it is seen that claim 1 as amended is directed to a method of acquiring vehicle parameter data from a vehicle data bus. The recited method includes a step of

retrieving, by the abstract software layer and responsive to a request for *vehicle parameter data* from the telematics application, vehicle *data bus configuration information* from a database [... , *emphasis added*].

The Examiner has asserted that *Shultz* teaches “retrieving, by the abstract software layer and responsive to a request for vehicle parameter data from the telematics application, vehicle data bus information from a database.” See page 5, ¶5 of the Detailed Action. However, *Shultz* does not disclose “*retrieving [...] vehicle data bus configuration information*,” as recited in claim 1 as amended. *Shultz* does state that the communications manager 212 handles communications over a vehicle data bus, but there is no discussion about the retrieval of vehicle *data bus configuration information* itself. Neither does *Shultz* disclose “*retrieving*” vehicle data bus configuration information “*responsive to a request for vehicle parameter data*,” as required by claim 1 as amended. In *Shultz*, vehicle parameter data has already been provided to the data warehouse 214 by the time a telematics application requests it. *Data bus configuration information* is therefore not relevant to the process used in *Shultz* for requesting vehicle parameter data. Therefore, *Shultz* does not disclose the “*retrieving*” step as recited in claim 1 as amended.

An essential difference between *Shultz* and the method recited in claim 1 as amended is that telematics applications in *Shultz* do not access the vehicle data bus to retrieve vehicle parameter data. Instead, they access the data warehouse 212, where vehicle parameter data has previously been stored.

The Examiner has acknowledged that *Shultz* does not disclose

retrieving [...] vehicle data bus information from a database that stores data bus information for a plurality of different types of data busses, the retrieved vehicle data bus information being associated with the type of data bus used on the vehicle on which the telematics application is executed.” [page 5, last paragraph of the Detailed Action].

In an effort to meet this aspect of the claim, the Examiner refers to *Seashore*.

Seashore appears to teach a method of allowing a user to select between different data bus codes for pre-configuring a portable diagnostic tool for use with a desired vehicle make (see Abstract and Fig. 4). The user performs this pre-configuration before any application program seeks to acquire data from a vehicle.

In contrast with *Shultz* and *Seashore*, claim 1 as amended recites a step of

retrieving, by the abstract software layer and *responsive to a request for vehicle parameter data* from the telematics application, vehicle data bus configuration information from a database that stores data bus configuration information for a plurality of different types of data busses, the retrieved vehicle data bus configuration information being associated with the type of data bus used on the vehicle on which the telematics application is executed [*emphasis added*].

There is no basis in *Shultz* for an abstract software layer retrieving “data bus configuration information” “responsive to a request for vehicle parameter data from the telematics application,” as recited in claim 1 as amended. In response to a request from a telematics application, *Shultz* accesses the data warehouse 212. It does not retrieve data bus configuration information or access a vehicle data bus. The fact that *Seashore* provides a way of storing different codes for different vehicle types is therefore irrelevant. The system of *Shultz* would not use them “responsive to a request for vehicle parameter data from the telematics application” since it does not, and has no reason to, access the vehicle data bus. Therefore, the combination of *Shultz* with *Seashore* fails to meet the “retrieving” step of claim 1 as amended.

For at least the reasons set forth above, Applicants respectfully submit that claim 1 as amended is allowable.

Claim 3 has been amended to bring its language into accord with that of claim 1 as amended.

Claims 2, 3 as amended, 4, and 14 depend from claim 1 as amended. Therefore, claims 2, 3 as amended, 4, and 14 are also allowable.

The Examiner has rejected claim 9 under 35 U.S.C. § 103(a) as being obvious based on *Klausner* (US Patent No. 6,748,305) in view of *Seashore*. Applicants have amended claim 9 and respectfully submit that claim 9 as amended is allowable.

Applicants have amended claim 9 to improve clarity. As with claim 1 as amended, the term “*vehicle data*” has been replaced with the term “*vehicle parameter data*” and the term “*data bus information*” has been replaced with the term “*data bus configuration information*.”

With the distinction between these terms in mind, it is seen that claim 9 as amended is directed to a method of acquiring vehicle parameter data from any of a plurality of different vehicle makes. The recited method includes, *inter alia*, the steps of

requesting *vehicle parameter data* by the telematics application; [and]
accessing, responsive to the step of requesting vehicle parameter data, a database that stores *data bus configuration information* for a plurality of different vehicle makes [emphasis added].

Claim 9 as amended is therefore seen to involve both “*vehicle parameter data*” and “*data bus configuration information*.” A telematics application performs a step of “*requesting vehicle parameter data*,” i.e., information about the vehicle, such as engine speed. Responsive to this step of “requesting,” a step is performed of “*accessing [...] a database that stores data bus configuration information [...]*,” i.e., information about the data bus of the vehicle.

To obtain the “*data bus configuration information*,” claim 9 as amended recites a step of

querying the database to retrieve *data bus configuration information* for a particular vehicle make that corresponds to the vehicle [.]

Prior to Applicants’ amendments herein, the Examiner has asserted that *Klausner* disclosed the “*querying*” step (see the paragraph bridging pages 8 and 9 of the Detailed Action). However, it is clear that *Klausner* does not disclose a step of “*querying the database to retrieve data bus configuration information*,” as recited in claim 9 as amended. The portions of *Klausner* that the Examiner alleged to disclose the “*querying*” step relate to “*vehicle parameter data*” only (Col. 2, lines 34-38). There is no mention of anything resembling “*data bus configuration information*.” Indeed, *Klausner* does not address the problem of handling different data bus configurations or protocols for different vehicle makes. Therefore, “*data bus configuration information*,” and the

"*querying*" step in general, are irrelevant to *Klausner*. Therefore, *Klausner* does not disclose a step of "*querying the database to retrieve data bus configuration information for a particular vehicle make that corresponds to the vehicle*," as recited in claim 9 as amended.

Claim 9 as amended further recites a step of

extracting *vehicle parameter data* from a vehicle data bus using the *vehicle data bus configuration information* [emphasis added].

The Examiner has asserted that *Klausner* disclosed the "extracting" step (*Id.*). However, *Klausner* clearly does not disclose a step of "*extracting vehicle parameter data using the data bus configuration information*," as recited in claim 9 as amended. Since *Klausner* does not employ "*data bus configuration information*," there is no way it can use that information for "*extracting vehicle parameter data*," as required by claim 9 as amended. Therefore, *Klausner* does not disclose a step of "*extracting vehicle parameter data from a vehicle data bus using the vehicle data bus configuration information*," as required by claim 9 as amended.

In addition, claim 9 as amended recites a step of

conditionally requesting other vehicle parameter data by the telematics application depending upon the extracted vehicle parameter data.

The Examiner has asserted that *Klausner* inherently discloses this step. However, this assertion was based on the contention that *Klausner* disclosed the "*querying*" and "*extracting*" steps. As Applicants have pointed out, however, *Klausner* does not disclose either the "*querying*" step or the "*extracting*" step as recited in claim 9 as amended. Therefore, it does not follow that *Klausner* inherently discloses the "*conditionally requesting*" step above. To the contrary, nothing in *Klausner* teaches that a telematics application ever requests vehicle parameter data in response to other, previously extracted vehicle parameter data. Therefore, *Klausner* does not disclose a step of "*conditionally requesting other vehicle parameter data by the telematics application depending upon the extracted vehicle parameter data*," as recited in claim 9 as amended.

Therefore, the grounds for rejecting claim 9 as amended have been overcome. Therefore, and for at least these reasons, the rejection of claim 9 as amended under 35 U.S.C. § 103(a) should be withdrawn. Applicants respectfully submit that claim 9 as amended is allowable.

Claims 10 and 11 have been amended to use language consistent with that of claim 9 as amended.

Claims 10 and 11, as amended, and claims 12-13 and 15 depend from claim 9 as amended and are allowable for the same reasons.

Conclusion:

Applicants contend that the application is now in condition for allowance. A notice to that effect is earnestly solicited. If, after reviewing this response, the Examiner believes that any of the claims of this application are still not allowable, the Examiner is invited to call Applicants' attorney at the telephone number below.

Respectfully Submitted,

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